

From ppporch at theporch.com Mon Oct 2 16:52:25 2017
From: ppporch at theporch.com (Phillip Porch)
Date: Mon, 2 Oct 2017 15:52:25 -0500
Subject: [BoatAnchors] Test Post
Message-ID: <C49C9604-600D-4E9F-B20F-EB6A07A02ABB@theporch.com>

I apologize to the list readers but after having to rebuild my server I need to make sure everything is hooked up for the list.

From arc5 at ix.netcom.com Mon Oct 2 17:25:45 2017
From: arc5 at ix.netcom.com (=?utf-8?B?YXJjNUBpeC5uZXRjb20uY29t?=
Date: Mon, 2 Oct 2017 21:25:45 GMT
Subject: [BoatAnchors] Test Post
Message-ID: <000f4242.4bbd4b65493f389c@ix.netcom.com>

We surely missed you.
Sent from my Ain't Smart Phone.

From packradt at gmail.com Tue Oct 3 19:01:24 2017
From: packradt at gmail.com (packradt packradt)
Date: Tue, 3 Oct 2017 18:01:24 -0500
Subject: [BoatAnchors] Subject: Re: Test Post --and Old Gear in Nashville
Message-ID: <CABYRTqe_ktFaYe5-SmZWVFz7Bg1cG=hC0YYf=LnZL9uza=-r7A@mail.gmail.com>

ppporch at theporch.com, ur msg rcvd RST es 599.

==For those in the Nashville Tennessee Area==

FALL SWAP MEET of the Music City Vintage Radio Club is October 14, 2017 at the Associated Builders and Contractor's Building, 1604 Elm Hill Pike, 37210. Free and open to the viewing public at 7:00*, we will be out by 12. Vendors have time to set up at 6:00, a few tables available as of this writing. (For sellers information at the October Swap Meet, contact Larry Chambers @ 615-355-2005 or Kelton Trammell 615-962-4310

For those who have never been before: Vintage Ham, military electronica,

antique industrial electronics, tubes, parts, horn speakers, phonographs, repair tools, test gear, whathaveyou in that vein, are All Welcome and All Show Up.

For those that *have been here before,

*IMPORTANT NOTICE: Due to time restrictions imposed by the venue management, we are going to start One Hour Earlier than we previously have. We will also abbreviate the Radio Contest to 2 categories (see below for more details). We will still hold an auction before we shut down and expect to have the meet wrapped up by noon. We apologize for any inconvenience that may cause. We are seeking potential alternative meeting locations. Should you know of a good, central location to Nashville, please speak to Larry, Bob, or Kelton. Thank you!

6 a.m. doors open for set-up / 7 a.m. meet officially begins. End time: 12 noon.

The Contest Categories will be:

1: Pre-1930: Any radio or related item produced before 1930.

2: Open Category: Any radio or related item, phonograph, speaker, advertising, etc.

(I hope you will come up and say howdy if you heard of this off the BoatAnchors Group)

Nathan

From wb3fau55 at neo.rr.com Mon Oct 2 17:53:39 2017

From: wb3fau55 at neo.rr.com (wb3fau55 at neo.rr.com)

Date: Mon, 2 Oct 2017 17:53:39 -0400

Subject: [BoatAnchors] Test Post

In-Reply-To: <C49C9604-600D-4E9F-B20F-EB6A07A02ABB@theporch.com>

Message-ID: <20171002215339.U8P05.3191.root@cdptpa-web09>

its working Phillip

---- Phillip Porch via BoatAnchors <boatanchors at theporch.com> wrote:

> I apologize to the list readers but after having to rebuild my server I need to make sure everything is hooked up for the list.

> -----

> BoatAnchors mailing list

> BoatAnchors at theporch.com

> <https://imac.theporch.com/mailman/listinfo/boatanchors>

From arc5 at ix.netcom.com Fri Oct 6 09:00:59 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Fri, 6 Oct 2017 08:00:59 -0500
Subject: [BoatAnchors] HRO on Shock Mount?
Message-ID: <001001d33ea3\$28af8820\$7a0e9860\$@netcom.com>

HRO on a shock mount? It's a rack-mount model.

Someone's try at flying the thing?

<http://www.ebay.com/itm/253192049834>

From 1oldlens1 at ix.netcom.com Fri Oct 6 13:34:47 2017
From: 1oldlens1 at ix.netcom.com (Richard Knoppow)
Date: Fri, 6 Oct 2017 10:34:47 -0700
Subject: [BoatAnchors] HRO on Shock Mount?
In-Reply-To: <001001d33ea3\$28af8820\$7a0e9860\$@netcom.com>
References: <001001d33ea3\$28af8820\$7a0e9860\$@netcom.com>
Message-ID: <a8d965c4-46dc-5cd7-2a10-2ec4b186ffc1@ix.netcom.com>

I don't think its an HRO although it has an HRO dial and coil set.
It might be a heavily modified HRO Jr. or possibly a military set but
none of the HRO series had a meter on the right side and there are other
differences.

FWIW, shock mounts were often supplied on marine receivers and
transmitters as well as airborne stuff.

On 10/6/2017 6:00 AM, David Stinson via BoatAnchors wrote:

> HRO on a shock mount? It's a rack-mount model.

>

> Someone's try at flying the thing?

>

>

>

> <http://www.ebay.com/itm/253192049834>

--

Richard Knoppow
1oldlens1 at ix.netcom.com
WB6KBL

From wlfuqu00 at uky.edu Fri Oct 6 08:25:18 2017
From: wlfuqu00 at uky.edu (Fuqua, Bill L)
Date: Fri, 6 Oct 2017 12:25:18 +0000
Subject: [BoatAnchors] Racal RA-17 power transformer
In-Reply-To: <mailman.0.1507136400.85077.boatanchors@theporch.com>
References: <mailman.0.1507136400.85077.boatanchors@theporch.com>
Message-ID:
<DM2PR0301MB07032C864A20C711C03C8EB3CB710@DM2PR0301MB0703.namprd03.prod.outlook.com>

I have a Racal RA-17 power transformer that has started leaking oil around one terminal.

I either need to find a way to seal it or a replacement transformer. Does anyone on the list

have a spare transformer or an idea what I can do to stop the leak?

By the way, I am going to to the Hamfest in Bowling Green, KY tomorrow. I have some ART-13 transmitters and BC-348 receivers. Just acquired them and have not looked at them closely. Also some other stuff to.

73
Bill wa4lav

From kd5byb at kd5byb.net Sun Oct 8 07:48:31 2017
From: kd5byb at kd5byb.net (Ben Hall)
Date: Sun, 8 Oct 2017 06:48:31 -0500
Subject: [BoatAnchors] Racal RA-17 power transformer
In-Reply-To:
<DM2PR0301MB07032C864A20C711C03C8EB3CB710@DM2PR0301MB0703.namprd03.prod.outlook.com>
References: <mailman.0.1507136400.85077.boatanchors@theporch.com>

<DM2PR0301MB07032C864A20C711C03C8EB3CB710@DM2PR0301MB0703.namprd03.prod.outlook.com>
Message-ID: <dff0dc5c-597a-6f8d-02d8-0520337d6615@kd5byb.net>

Hi Bill and list,

On 10/6/2017 7:25 AM, Fuqua, Bill L via BoatAnchors wrote:

> I have a Racal RA-17 power transformer that has started leaking oil
> around one terminal. I either need to find a way to seal it or a
> replacement transformer. Does anyone on the list have a spare
> transformer or an idea what I can do to stop the leak?

If it were mine, I'd invert the transformer so that the leaking terminal is pointed up. I'd then clean the area really well and try some of the

oil-resistant automotive RTV sealant.

Do you know how much oil has leaked out? One of the things I'd worry about if it were mine was how much oil was left inside. Years ago, I had an RBx series power supply with an oil-filled choke that had already let all the oil out. The consensus of the list was that running it without oil would not pose a problem as the choke wasn't dissipating all that much heat. A power transformer with no oil may be a much different story!

I hope all the list members in the path of Nate are doing okay. Looks like he's fixing to pay us a visit here in Northern Alabama today.

thanks much and 73,
ben, kd5byb

From kd5byb at kd5byb.net Sun Oct 8 08:13:18 2017
From: kd5byb at kd5byb.net (Ben Hall)
Date: Sun, 8 Oct 2017 07:13:18 -0500
Subject: [BoatAnchors] Arcing / sparking RAL power supply
Message-ID: <eac85d10-9175-4f0c-75d0-2a57fd898209@kd5byb.net>

Good morning all,

I've got an RAL and RAL power supply that I'm returning to service.

Folks here may remember the recent discussion of cleaning solvents to remove leaked capacitor oil - that problem has been all sorted out. The two capacitors that were leaking oil have been removed, taken apart, restuffed with modern capacitors, and have been reinstalled in the set. Interestingly, past those two physically-leaky metal-can oil-filled capacitors, I've yet to find an electrically-leaky capacitor in the set. Not too shabby for a set dating back to 1939.

My current problem is with the matching power supply. The RAL supply uses one 20k output bleeder resistor and two 6.2k resistors in parallel as the dropping resistor for the 90V 874 gas regulator tube. That 20k resistor measures 52k ohms...and the two 6.2k's in parallel measure 5k ohms. I'm not sure I've ever seen resistors so out of tolerance. But, given how they are buried in the power supply, I can see them getting really hot as there isn't a lot of cooling where they are. The RAL supply is a real servicing nightmare. Fortunately, I found no other obvious problems, and the filter caps seem to be in good shape electrically.

So, before I tore it apart, I put in on the variac yesterday to give it a smoke test. Got it up to working voltage while monitoring everything and while I saw no issues on the three meters (one on 6.3 VAC filaments,

one on B+ output of 180 VDC, the third on +90 VDC regulated output) I kept hearing what sounded like a very short, very intermittent, barely audible electrical discharge. Figuring I had a bad rectifier tube, I substituted in a silly-state 1N4007-based rectifier made into an old 4-pin tube base...and it still make the noise.

So I'm thinking how to proceed.

- 1) Seems like I need to make sure it really is an arc and not something I'm hearing. An AM radio should be able to tell me if there is a real arc.
- 2) If there is an arc, I need to determine where it is. Is it on the AC input side of the transformer including the input filtering which is quite elaborate in this set? Seems like I can pull the rectifier tube and run up the AC input voltage and see if I get the arcing.
- 3) Once I isolate it...I'm not sure how to physically locate it. The RAL supply is such a compact package with all the wiring shoved between other items where you can't see it.

Are there any hints from the group on how to chase down arcing?

thanks much and 73,
ben, kd5byb

From kd5byb at kd5byb.net Sun Oct 8 11:14:59 2017
From: kd5byb at kd5byb.net (Ben Hall)
Date: Sun, 8 Oct 2017 10:14:59 -0500
Subject: [BoatAnchors] Arcing / sparking RAL power supply
In-Reply-To: <e5b1262d-4792-48ee-b020-8237163fc3e6@ws19ops.com>
References: <eac85d10-9175-4f0c-75d0-2a57fd898209@kd5byb.net>
<e5b1262d-4792-48ee-b020-8237163fc3e6@ws19ops.com>
Message-ID: <54856465-08ea-88d8-2e14-98427eb08422@kd5byb.net>

Hi Meir and list,

Did some more troubleshooting this morning. Removed the rectifier and powered it up. Heard the same intermittent arcing. It's really quiet, but not muffled to my ear, so I'm not sure if its inside a transformer or the line filter.

Dave Stinson suggested putting together what I'll call a "hot box" to try and dry out the transformer. I do know that this power supply got wet at one time from evidence inside...so water intrusion into some part

of the unit could be very likely.

So I built up the hot box this morning - took the metal case from the RAL receiver, cut up a cardboard box to go over the top of the RAL case as insulation, and inverted the whole mess over the power supply and a 60W incandescent bulb. The temp inside the box is slowly climbing and is at about 100 deg F at the moment. Per the IR thermometer, the power transformer which is closest to the bulb is about 115 deg F and climbing slowly. I'll be checking it about once an hour to see where it levels off at.

On 10/8/2017 8:07 AM, WF2U wrote:

> Check the potted dual coil AC input line RFI filter. I got one of my
> power supplies with an internal short. In the beginning it sounded like
> sparks, then it started to stink, then blew the fuse. Then I took it
> out, and cleaned the mess of it leaking.

I will do this if the hot box treatment doesn't work. Looking at the schematic, it also contains a couple of capacitors inside. I usually like to replace any "across the line" and "line to ground" capacitors with the proper X and Y class capacitors...and replacing those inside that can will be a challenge. I thought about removing that dual line filter and bypassing it instead...and may end up doing that.

I noted something interesting this morning. I'm testing this unit on my garage workbench. The power source I'm using has a GFCI...and the GFCI is **not** tripping. I know its good, as about a week ago I had another unit on the bench out there that would trip it instantly, ha ha ha.

I've got think about what this means. (The problem is on the secondary side of the transformer? It's a line-to-line arc w/o leakage to ground?

I am feeding it with a three-wire cord that's chassis grounded. Maybe I should get one of the arc-detecting interrupters that are being used in Europe these days and incorporate it into a little test box...)

All of this is very interesting to me. Certainly a new problem I've not dealt with before. :)

thanks much and 73,
ben

From rbsingl at ilstu.edu Sun Oct 8 11:24:53 2017

From: rbsingl at ilstu.edu (Singley, Rodger)

Date: Sun, 8 Oct 2017 15:24:53 +0000

Subject: [BoatAnchors] Arcing / sparking RAL power supply

In-Reply-To: <54856465-08ea-88d8-2e14-98427eb08422@kd5byb.net>

References: <eac85d10-9175-4f0c-75d0-2a57fd898209@kd5byb.net>

<e5b1262d-4792-48ee-b020-8237163fc3e6@ws19ops.com>

<54856465-08ea-88d8-2e14-98427eb08422@kd5byb.net>

Message-ID:

<MWHPR03MB275267527B6B8034883DABF7B8770@MWHPR03MB2752.namprd03.prod.outlook.com>

Ben,

Don't run the power transformer unloaded anymore until you dry it out since that creates even higher secondary voltages and that intermittent arc can easily turn into a permanent carbon path.

I would start by using the "hot box" idea to bake it for some time then when you are ready to try it powered up again use some wirewound resistors on the secondary to load it and bake it further. My preferred condition for this second baking act is to choose resistors so the transformer is loaded to about half of its rated load when it is running at 50% of normal primary voltage. This allows you to cook it with hopefully a low enough voltage that it doesn't arc and build a carbon path.

Rodger WQ9E

From 1oldlens1 at ix.netcom.com Sun Oct 8 01:09:10 2017

From: 1oldlens1 at ix.netcom.com (Richard Knoppow)

Date: Sat, 7 Oct 2017 22:09:10 -0700

Subject: [BoatAnchors] HRO on Shock Mount?

In-Reply-To: <001001d33ea3\$28af8820\$7a0e9860\$@netcom.com>

References: <001001d33ea3\$28af8820\$7a0e9860\$@netcom.com>

Message-ID: <b7eecadc-2700-832d-1a69-79f182207566@ix.netcom.com>

As I posted before (I think) its not an HRO although it looks like an HRO Jr. I think its either home brew or else a very thoroughly hacked HRO.

On 10/6/2017 6:00 AM, David Stinson via BoatAnchors wrote:

> HRO on a shock mount? It's a rack-mount model.

>

> Someone's try at flying the thing?

>

>

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> <http://www.ebay.com/itm/253192049834>

>

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> BoatAnchors mailing list

> BoatAnchors at theporch.com

> <https://imac.theporch.com/mailman/listinfo/boatanchors>

>

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Richard Knoppow
1oldlens1 at ix.netcom.com
WB6KBL

From arc5 at ix.netcom.com Sun Oct 8 08:46:32 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Sun, 8 Oct 2017 07:46:32 -0500
Subject: [BoatAnchors] Arcing / sparking RAL power supply
In-Reply-To: <eac85d10-9175-4f0c-75d0-2a57fd898209@kd5byb.net>
References: <eac85d10-9175-4f0c-75d0-2a57fd898209@kd5byb.net>
Message-ID: <006a01d34033\$7c8c0fe0\$75a42fa0\$@netcom.com>

Morning, Ben.

Pull the rectifier first and see if you still hear the arc. If you do, be sad. It's likely inside the transformer and due to accumulated moisture.

Isolate the transformer from the rest of the circuit to confirm.

If so, there is a chance of recovery- get the transformer hot for a long period of time to drive out the moisture and re-test. Cover the supply with a wooden box and put an incandes. light bulb under there. Get it at about 150 degrees or so for a couple of days. Or some other means.

If it is the tranny, I have a parts supply here. I can pull the transformer (or any other part you find defective) and send it to you for the cost of postage.

GL OM ES 73 DE Dave AB5S

P.S. Still love those tube adaptors you made. Got to send you some scratch to get some more. Anyone who missed them, missed out.

From arc5 at ix.netcom.com Sun Oct 8 09:24:01 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Sun, 8 Oct 2017 08:24:01 -0500
Subject: [BoatAnchors] Fall Project: Navy ATD, Part 1

Message-ID: <006b01d34038\$b8b03be0\$2a10b3a0\$@netcom.com>

(A lot of this is obvious to you "old hands," but I'm writing it for someone who may not have as much experience as you. Thanks for your patience.)

WARNING:

There is 1000V B+ inside the ATD Dynamotor and Transmitter.
If you get a finger on this, it will likely kill you.
Slow down. Look twice. Think twice. Stay alive.

The Bendix ATD is an interesting WWII Aircraft transmitter.
<https://photos.app.goo.gl/I4Bc2Y0B7D1TebC33>
Reported to be a competitor to the ART-13, it couldn't match the capabilities of that fine transmitter, but neither does it compare in complexity, estimate of price and ease of service. Although- some "features" of the ATD lead me to think it wasn't meant to be serviced, as we'll see.
Mike Hanz has kindly hosted the Maintenance manual for the ATD, should you desire detailed information on its specifications and accessories.
<http://aafradio.org/docs/ATD.pdf>

Most ATDs "in captivity" are in NOS condition, with accessories, dynamotor and connectors, having never been installed. I was fortunate in receiving mine in this condition, with the exception that it had been stored in some early form of foamed polyurethane which had decayed, became powdery and spread "frazz" all over the place, including inside the Plate Current meter, which had its meter glass pushed-in. Most of this was removed with "canned air," but the meter would need repair.

Restoration Goals and Principles:

1. Radios that play have the best chance of being preserved beyond my short time as their care-giver.

Dead, cold "museum mummy" radios gather very little interest. These "mummies," if not thrown away at once by grand kids, end by being "donated" to museums and groups who do not really want them and who will either box them away, never to be seen until Judgment Day, or will leave them gathering dust until they are tossed into the recycle bin. Playing radios find homes. "Mummy" radios find the dump.

2. Preservation of the history and "story" of a radio with its original circuit design and mission trumps performance. Many circuits and stages will

continue to operate at an acceptable level with parts as much as 20% out of spec or with greatly reduced

B+ Voltages. Out-of-spec parts which still function and do not damage circuits remain undisturbed. If that means a 50-watt radio outputs 40 watts, that is acceptable. I have plastic "Barbie Radios" for "performance."

3. Preserving as many of the original components and circuits as possible, consistent with the radio playing is a priority. Drilling holes, removing whole circuits and adding things like "S-meters" etc. is out-of-bounds. Any change must be 100% restorable to the original design- meaning disconnecting a bad WWII electrolytic and tacking in a modern replacement, adding a plug-in removable IF filter, swapping a wire from one terminal to another (easy FM for type-12 gear) is all ok as long as it can be

put-back to "stock" easily.
Preserving the operation and "story" of the set
is the primary goal.

General tips for work on the ATD:
Clearance is tight in this transmitter.
Slow down, look close, think twice, be gentle.
Your patience will be rewarded. Get a
compartmented
box for storing screws, nuts etc. as you remove
them.
Screws on the bench will surely be stolen by the
"Screw Gremlins" and make you unhappy.
Use the correct-sized screwdrivers and ratchets;
many of these screws are seated in very soft
aluminum
which is easily scratched. Some old carpet on
your
bench will protect the finish and help catch
wayward
screws. Be very careful when moving and
repositioning
the radio on your work bench. You may break the
antenna connectors, bend the tuning unit
hold-downs
and do other things that will make you say mean
things to yourself.

The ATD Dynamotor:
<https://photos.app.goo.gl/CHgXyQd3gIviA8rB3>
Refurbishing the ATD dynamotor and filter box is
fairly
unremarkable, with a couple of caveats.
Remove the end bells. Hand-rotate the armature to
check
for any problems. Clean and re-lube the bearings.

Go through the filter box. Tighten grounds,
correct
any corrosion. First "caveat:" Build HEAVY-gauge

primary power cables. Wimpy 12 gauge won't cut
it.

The ATD dynamotor takes about as much "umph" to
start
as does the dyno for the BC-375. Batteries across

the supply for this one. For the

dyno-to-transmitter

cable, don't skimp on the Primary Voltage wire size.

Use high-voltage-rated wire for the 1000V;

I used inner conductor from RG-59 coax.

Second: When run-testing the dynamotor without connection to the transmitter, pull the HV fuse. While there are load resistors across the 1000V buss,

they aren't fully effective.

If you run the dyno without the transmitter, the 1000V buss will soar and cause arc-overs inside C-203

and possibly at the connector. Pull the HV fuse to avoid this. Once satisfied with your refurb of

the dyno, run it for at least 30 minutes to drive out moisture and listen for any "oddities" that need attention.

Restoring the ATD Transmitter:

Do NOT attempt to remove the tubes for testing.

Do NOT attempt to remove the tuning units just yet.

More on this later.

Examine the radio for anything unusual- loose or broken

parts, meter glasses pushed-in, etc.

How to remove the tuning units:

On one end of the transmitter is a silver, square handle

you can lift up and turn clockwise to change the active

channel. Do not attempt to remove the active channel

unit; you will damage it if you try.

Remove the other three inactive channels and set aside.

Lift the small, square silver handle on the side of the

transmitter and rotate it clockwise to disengage the

remaining tuning unit. Note that when you lift this

handle out for turning, it disengages the motor drive

from the selecting shaft.

Remove and set the last tuning unit aside.

Turn the radio bottom-side-up. Remove the screws that

hold the panels with the feet and shock mounts.

Note there is one screw on each panel that is under

the shock assembly and a bit tricky to reach.

<https://photos.app.goo.gl/JJLCAhyG16jlT9nB3>

I'm tempted to leave this screw out when reassembling-

don't tell on me. Remove the left and right shock

assemblies and set aside. Remove the bottom cover

with all the vent holes and set aside. Say

"hello"

to a whole bunch of resistors you'll soon be testing.

Remove the cover from the side with the silver handle.

You'll find the channel changing motor and gear box

under this cover. See that chain driving the front

panel channel indicator? If you have to repair one

of the meters, you're going to curse that vile contraption of the Devil. More on that later.

<https://photos.app.goo.gl/SLNEEU6YnQxQbemQ2>

On the other side of the transmitter, remove the middle panel above the connectors.

<https://photos.app.goo.gl/gWRg7Z9jcwwtjYJT2>

Remove the back, and now you will see why you should not try to pull the tubes for testing-

<https://photos.app.goo.gl/THxwqa9utFqTZF923>

the tube hold-downs appear to have been designed by someone who either wanted to sell lots of tubes or wanted any defective ATD sent to "Davey Jones" and a new one set in its place. The hold-downs have "spikes" which dig-into the tube's Bakelite base and make it nearly impossible to get the tubes

out of the socket without breaking them. The only

one without that infernal thing is the VR tube,
and
that's good because we need to remove it to get
to the gear box to oil it.
I needed to remove the 12SL7 Mic Amp to fix a
problem. I gently worked a screwdriver blade
under
the tube base and gently rocked the tube back-and-
forth, trying to walk it out of that Chinese
Finger Trap. This is the result:
<https://photos.app.goo.gl/OXDVotw732B1hWgg2>

I haven't tried to remove the other tubes- thank
Goodness they seem to work OK. I'm going to try
cutting a thin piece of sheet brass shim stock
and see if I can push it down the base of the
tubes,
disengaging the spikes from the Bakelite so the
tubes will come out. Any other ideas?

This transmitter has the weirdest T/R switch.
I thought its "little brother from a different
mother,"
the ATB switch was wild. This thing also rotates
and- well, you'll see:
<https://photos.app.goo.gl/QKFZp80T5WwOWlhg1>
<https://photos.app.goo.gl/GJl0JvBbPLQwRkNf1>
Note: Do not use abrasives on these or any other
contacts in the transmitter. Unless a contact is
eaten-up with corrosion, brown paper soaked in
De-Ox-It should be your first choice.
Be gentle- a bent contact from rough handling
will not be easy to mend.

Now put on some relaxing music, brew a pot or pour
a glass of your favorite beverage and get
comfortable.
Start at one corner of the rig and go over it
inch-by-inch. Tedious, yes. But it will pay
dividends.
Give every "ground" screw you find a small
"tweak;"
that's usually all that's needed. There are lots
of
wiring screw terminals. Check that they are
tight.
Look for any obvious problems.

More to follow in Part 2.

GL OM ES 73 DE Dave AB5S

P.S. Since it's "Halloween Time," here's a little
bit to scare some folks, heh heh...

<https://photos.app.goo.gl/eiw10IaavfQ0u6pZ2>

From arc5 at ix.netcom.com Sun Oct 8 10:01:30 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Sun, 8 Oct 2017 09:01:30 -0500
Subject: [BoatAnchors] Sorry for Format Follies
In-Reply-To: <006b01d34038\$b8b03be0\$2a10b3a0\$@netcom.com>
References: <006b01d34038\$b8b03be0\$2a10b3a0\$@netcom.com>
Message-ID: <007101d3403d\$f3735140\$da59f3c0\$@netcom.com>

Sorry for the odd formatting in my posts.
I'm still trying to figure-out this confounded
Microsoft Outlook mail. I tell the thing
"Plain Text;" I'll do my own line breaks,
thanks,
and still, it insists on inserting devilish
formatting code that that makes a mess.

I'll figure it out eventually.
Thanks for your patience.

From arc5 at ix.netcom.com Wed Oct 11 09:02:56 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Wed, 11 Oct 2017 08:02:56 -0500
Subject: [BoatAnchors] WE Receiver
Message-ID: <000601d34291\$437616a0\$ca6243e0\$@netcom.com>

Has anyone ever seen this receiver?
Have one available?

<https://photos.app.goo.gl/HX14Am7PMnDmr1Zk2>
<https://photos.app.goo.gl/sNJH0itliiy3ELQk82>

73 OM DE Dave AB5S

From kd5byb at kd5byb.net Sat Oct 14 15:39:42 2017
From: kd5byb at kd5byb.net (Ben Hall)
Date: Sat, 14 Oct 2017 14:39:42 -0500
Subject: [BoatAnchors] Arcing / sparking RAL power supply, part two
In-Reply-To: <eac85d10-9175-4f0c-75d0-2a57fd898209@kd5byb.net>
References: <eac85d10-9175-4f0c-75d0-2a57fd898209@kd5byb.net>
Message-ID: <e390bd4e-5479-c741-a172-3a5933770a3d@kd5byb.net>

Good afternoon all,

The RAL power supply has been in my homemade "hot box" for a little over a week now. (the components got good and warm - measured between 135 and 150 deg F on the IR temp gun depending on the time of day)

And...drum roll please...the arcing is still there. :(Next up...start taking the unit apart to determine what component(s) are arcing. It sure sounds to me like it's coming from the large, enclosed AC line filter, so I figure I'll start there.

Will report findings.

thanks much and 73,
ben, kd5byb

From kd5byb at kd5byb.net Sun Oct 15 14:23:08 2017
From: kd5byb at kd5byb.net (Ben Hall)
Date: Sun, 15 Oct 2017 13:23:08 -0500
Subject: [BoatAnchors] Arcing / sparking RAL power supply, part three
In-Reply-To: <e390bd4e-5479-c741-a172-3a5933770a3d@kd5byb.net>
References: <eac85d10-9175-4f0c-75d0-2a57fd898209@kd5byb.net>
<e390bd4e-5479-c741-a172-3a5933770a3d@kd5byb.net>
Message-ID: <83c53a63-c0a1-30c9-0840-de8f57caea1e@kd5byb.net>

Good afternoon all,

Did some more work on the RAL power supply this morning. I was pretty sure yesterday that the arcing noise was coming from the area of the can-enclosed AC line filter, L-203. Because L-203 has some across-the-line capacitors inside that I wanted to replace, it needed to come out anyways, so that seemed to be a good point to determine in the arcing noise was coming from the AC input circuitry leading up to

L-203...or in the power transformer after L-203.

After L-203 was removed, I applied power to the normal AC input terminals to see if the arcing was in the L-201 / L-202 / C-201 / C-202 / C-203 network. No arcing.

I then applied power to the wires that had connected to the output side of L-203. No arcing. So at this point I do a little happy dance because it appears that the power transformer is in good shape. :)

Next up...I took L-203 apart to see what was inside. I had to drill out the four thru-hole mounting hole rivets to remove the can lid. Once open...sigh...the whole thing is potted in what looks to be tar so I can't see anything in there. So...I get out the white-gas fueled camp stove, a Sam's-sized can that used to contain tuna, and proceed to build a little double boiler. (tuna can filled with water...L-203 open side up in the water...camp stove under the tuna can) The IR temp gun shows the tar heating oh-so-very-slowly so I fire up the lawn mower and cut the lawn, maybe for the last time this year. :)

After about an hour of heating, the tar is at about 140 deg F and is showing no signs of melting. Turns out, the melting point of this tar is well above boiling water temperature. So I invert the thing over another Sam's-sized tuna can and proceed to heat the thing up with a propane torch.

After about 15 minutes of heating, the guts plop out in a nasty, gooey mess. Yeech. Poking around in the hot pile of tar finds the two caps and the double-winding choke. It appears that they taped the choke and the two caps together, wired them, then slapped them in the can and filled it with tar. It's not worth salvaging. The enclosure is probably reusable; it's sitting in a can of diesel / kerosene / ATF / mineral spirits mix I use to clean antique engine parts to remove the rest of the icky tar.

So...now to figure out my path forward. Off-list, another member shared experiences with L-203 shorting out. He simply removed it and bypassed it, with no ill effects on the receiver. I'll probably do the same, but I'm curious to see if I can't duplicate the original circuitry with modern components before I make that decision. :)

Anyways...it was a happy morning / early afternoon. :)

thanks much and 73,
ben, kd5byb

From wf2u at ws19ops.com Sun Oct 15 16:13:47 2017

From: wf2u at ws19ops.com (WF2U)
Date: Sun, 15 Oct 2017 16:13:47 -0400
Subject: [BoatAnchors] Arcing / sparking RAL power supply, part three
In-Reply-To: <83c53a63-c0a1-30c9-0840-de8f57caea1e@kd5byb.net>
References: <eac85d10-9175-4f0c-75d0-2a57fd898209@kd5byb.net>
<e390bd4e-5479-c741-a172-3a5933770a3d@kd5byb.net>
<83c53a63-c0a1-30c9-0840-de8f57caea1e@kd5byb.net>
Message-ID: <ed1b674a-091a-41c4-8761-2a39556406b5@ws19ops.com>

I'm glad you found the problem. It seems to me that this line filter unit may be of inferior construction. Mine actually already leaked tar when it cooked prior to me taking possession of it. The filter was already completely shorted. I just bypassed it and took it out. Unless you are operating in an electronic/electrical environment of a ship with machinery, other RF generating gear and a lot of transients on the line, I don't see a reason to make up another similar filter.

73, Meir WF2U
Landrum, SC

?Sent from BlueMail ?

On Oct 15, 2017, 2:23 PM, at 2:23 PM, Ben Hall via BoatAnchors <boatanchors at theporch.com> wrote:

>Good afternoon all,

>

>Did some more work on the RAL power supply this morning. I was pretty

>sure yesterday that the arcing noise was coming from the area of the

>can-enclosed AC line filter, L-203. Because L-203 has some

>across-the-line capacitors inside that I wanted to replace, it needed

>to

>come out anyways, so that seemed to be a good point to determine in the

>

>arcing noise was coming from the AC input circuitry leading up to

>L-203...or in the power transformer after L-203.

>

>After L-203 was removed, I applied power to the normal AC input

>terminals to see if the arcing was in the L-201 / L-202 / C-201 / C-202

>

>/ C-203 network. No arcing.

>

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>

>of L-203. No arcing. So at this point I do a little happy dance

>because it appears that the power transformer is in good shape. :)

>

>Next up...I took L-203 apart to see what was inside. I had to drill

>out

>the four thru-hole mounting hole rivets to remove the can lid. Once

>open...sigh...the whole thing is potted in what looks to be tar so I
>can't see anything in there. So...I get out the white-gas fueled camp
>stove, a Sam's-sized can that used to contain tuna, and proceed to
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>a little double boiler. (tuna can filled with water...L-203 open side
>up in the water...camp stove under the tuna can) The IR temp gun shows
>
>the tar heating oh-so-very-slowly so I fire up the lawn mower and cut
>the lawn, maybe for the last time this year. :)
>
>After about an hour of heating, the tar is at about 140 deg F and is
>showing no signs of melting. Turns out, the melting point of this tar
>is well above boiling water temperature. So I invert the thing over
>another Sam's-sized tuna can and proceed to heat the thing up with a
>propane torch.
>
>After about 15 minutes of heating, the guts plop out in a nasty, gooey
>mess. Yeech. Poking around in the hot pile of tar finds the two caps
>and the double-winding choke. It appears that they taped the choke and
>
>the two caps together, wired them, then slapped them in the can and
>filled it with tar. It's not worth salvaging. The enclosure is
>probably reusable; it's sitting in a can of diesel / kerosene / ATF /
>mineral spirits mix I use to clean antique engine parts to remove the
>rest of the icky tar.
>
>So...now to figure out my path forward. Off-list, another member
>shared
>experiences with L-203 shorting out. He simply removed it and bypassed
>
>it, with no ill effects on the receiver. I'll probably do the same,
>but
>I'm curious to see if I can't duplicate the original circuitry with
>modern components before I make that decision. :)
>
>Anyways...it was a happy morning / early afternoon. :)
>
>thanks much and 73,
>ben, kd5byb
>
>-----
>BoatAnchors mailing list
>BoatAnchors at theporch.com
><https://imac.theporch.com/mailman/listinfo/boatanchors>

From john.shriver at gmail.com Mon Oct 16 16:57:19 2017
From: john.shriver at gmail.com (John Shriver)
Date: Mon, 16 Oct 2017 16:57:19 -0400

Subject: [BoatAnchors] Arcing / sparking RAL power supply, part three
In-Reply-To: <ed1b674a-091a-41c4-8761-2a39556406b5@ws19ops.com>
References: <eac85d10-9175-4f0c-75d0-2a57fd898209@kd5byb.net>
<e390bd4e-5479-c741-a172-3a5933770a3d@kd5byb.net>
<83c53a63-c0a1-30c9-0840-de8f57caea1e@kd5byb.net>
<ed1b674a-091a-41c4-8761-2a39556406b5@ws19ops.com>
Message-ID: <CAEv8c7FHMbWCPiV5iQ2prCXFqpssNtxCYjVdw4y3SesszOK1w@mail.gmail.com>

The line filter may also keep noise from the device out of the power line,
the reason so much equipment has line filters these days.

It might be vary practical to scavenge components from a modern line filter
and put them into the old case. Much higher quality parts for this
application today.

On Sun, Oct 15, 2017 at 4:13 PM, WF2U via BoatAnchors <
boatanchors at theporch.com> wrote:

> I'm glad you found the problem. It seems to me that this line filter unit
> may be of inferior construction. Mine actually already leaked tar when it
> cooked prior to me taking possession of it. The filter was already
> completely shorted. I just bypassed it and took it out. Unless you are
> operating in an electronic/electrical environment of a ship with machinery,
> other RF generating gear and a lot of transients on the line, I don't see a
> reason to make up another similar filter.

>

> 73, Meir WF2U

> Landrum, SC

>

>

From john.shriver at gmail.com Mon Oct 16 21:30:53 2017
From: john.shriver at gmail.com (John Shriver)
Date: Mon, 16 Oct 2017 21:30:53 -0400
Subject: [BoatAnchors] Arcing / sparking RAL power supply, part three
In-Reply-To: <0746c2ac-d1b8-43c8-b1a3-884cd2194c65@ws19ops.com>
References: <eac85d10-9175-4f0c-75d0-2a57fd898209@kd5byb.net>
<e390bd4e-5479-c741-a172-3a5933770a3d@kd5byb.net>
<83c53a63-c0a1-30c9-0840-de8f57caea1e@kd5byb.net>
<ed1b674a-091a-41c4-8761-2a39556406b5@ws19ops.com>
<CAEv8c7FHMbWCPiV5iQ2prCXFqpssNtxCYjVdw4y3SesszOK1w@mail.gmail.com>
<0746c2ac-d1b8-43c8-b1a3-884cd2194c65@ws19ops.com>
Message-ID: <02A78F83-D7A4-4CFF-B90F-B0CA96D9DE36@gmail.com>

Traditional linear rectifier/filter power supplies generate plenty of noise on the
line. Sharp current transients as the diodes switch on, with a big current spike
into the filter capacitor. A spike the other way when the output of the rectifier

drops below the capacitor voltage. That's what the line filter will keep out of everything else in the shack.

Current rules, at least for Europe, require power supplies with 'good' load factors. The current and voltage waveforms have to be similar. Things like synchronous or active regulation.

Of course, plenty of switching supplies generate gobs of hash as well. I couldn't listen to any AM radio in the house until I purged all the compact fluorescent light bulbs.

> On Oct 16, 2017, at 5:23 PM, WF2U <wf2u at ws19ops.com> wrote:

>

> John,

>

> I'd have agreed with you if there was any digital equipment, SCR regulator, or a lot of relays switching high current in the power supply.

> There is absolutely nothing in the linear power supply that generates transients and the receiver itself has bypass capacitors on all the lines coming into it from the power supply.

>

> 73, Meir WF2U

> Landrum, SC

>

> Sent from BlueMail <<http://www.bluemail.me/r?b=10777>>

> On Oct 16, 2017, at 4:57 PM, John Shriver <john.shriver at gmail.com
<mailto:john.shriver at gmail.com>> wrote:

> The line filter may also keep noise from the device out of the power line, the reason so much equipment has line filters these days.

>

> It might be vary practical to scavenge components from a modern line filter and put them into the old case. Much higher quality parts for this application today.

>

>

>

From kd5byb at kd5byb.net Sun Oct 22 10:32:50 2017

From: kd5byb at kd5byb.net (Ben Hall)

Date: Sun, 22 Oct 2017 09:32:50 -0500

Subject: [BoatAnchors] Arcing / sparking RAL power supply, part four

In-Reply-To: <02A78F83-D7A4-4CFF-B90F-B0CA96D9DE36@gmail.com>

References: <eac85d10-9175-4f0c-75d0-2a57fd898209@kd5byb.net>

<e390bd4e-5479-c741-a172-3a5933770a3d@kd5byb.net>

<83c53a63-c0a1-30c9-0840-de8f57caea1e@kd5byb.net>

<ed1b674a-091a-41c4-8761-2a39556406b5@ws19ops.com>

<CAEv8c7FHMbWCPiV5iQ2prCXFqpssssNtxCYjVdw4y3SesszOK1w@mail.gmail.com>

<0746c2ac-d1b8-43c8-b1a3-884cd2194c65@ws19ops.com>
<02A78F83-D7A4-4CFF-B90F-B0CA96D9DE36@gmail.com>
Message-ID: <c0178998-0dfa-053d-b24e-f96232bba323@kd5byb.net>

Good morning all,

Sorry for the delay in responding. Been sick off and on most of this week. Not sick enough to stay home from work...but sick enough that work took all of my attention leaving no time for boatanchor work. I'm starting to feel human again today...so am back at the RAL.

I appreciate all of the comments on the line filter. Noise here at the house isn't bad...but it isn't great either. Thankfully, I'm not plagued by the compact fluorescent or LED bulb noise, even though I use a lot of both. I *do* have a couple of power supplies that use SCR on the transformer input side which I believe are quite noisy...so the filter probably should be replaced.

What I plan to do is clean the remainder of the tar out of the original filter from which I'd already moved the "guts" and either find a COTS line filter or design a new filter to go inside based on discrete components that match the original components, more or less.

By "more or less" what I mean is that the original specifications were not exactly specific, IE: the internal inductors were "2 to 12 mH". Mouser has some nice common-mode units that are 9.something mH which I'll use. On a lark, I made up a model of half of the filter in Elsie and it appears that while filter performance does change from a 2 mH inductor to say a 10 mH inductor, the low-pass corner stays well below 100 dB down at 250 kHz which seems more than adequate. Of course, that's just a guess, and assuming that I'm modeling the filter properly because Elsie is only modeling half of the filter. (the filter is balanced, Elsie is unbalanced)

On an interesting side-note, the filter can does appear to have copper walls that are tinned with solder. Interesting. Explains why the empty can is still quite heavy.

thanks much and 73,
ben, kd5byb

From a.b.bonds at Vanderbilt.Edu Sun Oct 22 14:27:01 2017
From: a.b.bonds at Vanderbilt.Edu (Bonds, A B)
Date: Sun, 22 Oct 2017 18:27:01 +0000
Subject: [BoatAnchors] Need a switch
Message-ID: <C8FFB7BC5D48064D8BF9AD0086503DF98454ACB6@ITS-HCWNE107.ds.vanderbilt.edu>

My Preciousssss.... SP-600 suffered an untimely collision and the Man/AGC switch is busted. This is a DPDP toggle (no center off) with a 3/4" bat handle. I know I can get a nice shiny new one from several sources, but would prefer patina. Will pay all expenses and then some if you have one in your junk box.

Thanks!

A. B. Bonds
Kingston Springs TN

From nielwiegand at aggienetwork.com Tue Oct 24 08:55:06 2017
From: nielwiegand at aggienetwork.com (Niel Wiegand)
Date: Tue, 24 Oct 2017 07:55:06 -0500
Subject: [BoatAnchors] Wanted, Eico 720
Message-ID: <44b58393-7576-558e-5e69-3320009f6e3d@aggienetwork.com>

I'm looking for an Eico 720. Any shelf queens out there that we can talk about? either cash or trade.

Niel - W0VLZ

From wwatson5 at sbcglobal.net Sat Oct 28 10:35:42 2017
From: wwatson5 at sbcglobal.net (William Watson)
Date: Sat, 28 Oct 2017 14:35:42 +0000 (UTC)
Subject: [BoatAnchors] Need SX-62 Dial Pointer
References: <18340236.6066696.1509201342543.ref@mail.yahoo.com>
Message-ID: <18340236.6066696.1509201342543@mail.yahoo.com>

I need a Hallicrafters SX-62 sliding dial pointer.
If someone has one you would sell me or trade for something, please let me know.
Thanks.
Joe WatsonW5WBR

From arc5 at ix.netcom.com Fri Oct 27 08:27:47 2017
From: arc5 at ix.netcom.com (David Stinson)
Date: Fri, 27 Oct 2017 07:27:47 -0500
Subject: [BoatAnchors] UPS Rates Going Up 5%
Message-ID: <001701d34f1f\$00c2e730\$0248b590\$@netcom.com>

It's going to get where we can't trade beyond local anymore.

Dear UPS Customer,

The following changes will take effect on December

24, 2017.

The rates for UPSR Ground, UPS Air and International services, as well as UPS Air Freight rates within and between the U.S., Canada and Puerto Rico, will increase an average net 4.9%. The dimensional weight divisor for packages less than or equal to one cubic foot in size (1,728 cubic inches) will be 139 for all U.S. domestic services subject to Daily Rates or Alaska and Hawaii Rates.

Criteria and pricing for Additional Handling and Large Package surcharges will change.

73 OM DE Dave AB5S

From arc5 at ix.netcom.com Sat Oct 28 15:17:38 2017

From: arc5 at ix.netcom.com (David Stinson)

Date: Sat, 28 Oct 2017 14:17:38 -0500

Subject: [BoatAnchors] Hi-Z Microphones with the Navy ATD Transmitter

Message-ID: <001b01d35021\$6c559fd0\$4500df70\$@netcom.com>

ATD

<https://photos.app.goo.gl/859Q21luomqXxkN83>

When the microphone circuit in the Navy ATD transmitter is selected for "MAGNETIC," a 300 Ohm resistor shunts the microphone audio line directly

to ground. I suppose it's looking for a Low-Z mike.

A simple, reversible change will allow Hi-Z, amplified microphones like the D-104 to be used with the Navy ATD Transmitter:

>Set the Channel to A, B or C.

>Remove the "D" tuning unit.

>Set the switch on the side wall near the front to "Magnetic."

>Remove the shock mount under the Plate and Grid/Battery meters.

Locate the Microphone Resistor Board to the rear of the 12SL7 Mic Amp tube, V107.
<https://photos.app.goo.gl/BECccNq7YG1RTcly2>

Locate the 300 Ohm resistor, R-145: it is most in-board of the resistors and the smallest.

Cut the lead furthest from V107 and secure the resistor end.
<https://photos.app.goo.gl/GIyBdfsuUbpzweQ83>

I used an amplified D-104 with the gain set low to check into the Texoma AM Trader's Net this morning with good reports. I have not yet tried any other hi-Z mikes.

The full schematic and parts lists are online
thanks
to Mike Hanz at:

http://aafradio.org/docs/ATD_schematic.png

GL ES 73 OM DE Dave AB5S